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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/707,757	11/07/2000	Curtis L. Ratzlaff	SILI:003	9355

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EXAMINER

DIMYAN, MAGID Y

ART UNIT

PAPER NUMBER

2825

DATE MAILED: 08/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/707,757

Applicant(s)

RATZLAFF ET AL.

Examiner

Magid Y Dimyan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- ☐ Interview Summary (PTO-413) Paper No(s). _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because of the reasons set forth on the attached Form PTO-948. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 5 – 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Yastrow (U.S. Patent No. 5,410,490).

4. Referring to claim 1, Yastrow discloses a method for compiling a circuit interconnect model as claimed herein (see Fig. 5; column 6, lines 30 – 35) which includes providing extraction data from an interconnect (see blocks 14 and 16, Fig. 5),

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using a reduced interconnect model (see column 4, lines 1 – 9), and evaluating the model for a set of conditions to obtain a solution, as claimed (see Fig. 5).

5. As per claims 5 and 6, see Fig. 5; column 6, lines 17 – 30, which cite the use of a program (i.e., using a computer or electronic media, as claimed) for implementing the method of claim 1.

6. Referring to claims 7 and 8, see Abstract; column 1, lines 53 – 64, which recite the methods for making, verifying or designing an integrated circuit device, as claimed herein.

7. Claim 9 has the same limitations as claim 1, and therefore the same rejections apply.

8. Claim 10 has the same limitations as claim 5, and therefore the same rejections apply.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yastrow in view of Savithri et al (henceforth, Savithri) – U.S. Patent No. 6,499,131. The teachings of Yastrow are cited above, and described in detail in his disclosure.

However, Yastrow does not teach writing the model to a parasitic database, as claimed herein. Savithri, on the other hand, discloses a method for verification of crosstalk noise in a CMOS design that uses reduced interconnect models (see column 6, lines 6 – 13), and writes them into a parasitic database. See Fig. 4B; column 6, lines 13 – 31. The use of a circuit database is also cited by Savithri (see column 11, line 8 – 11). Furthermore, Savithri makes use of a standard parasitic RLC translator (block 403, Fig. 4B), which would provide a name map for the database, as claimed herein. Since using a database for parasitic extraction as well as a circuit database will speed up the design and verification process for IC designs, it would therefore be obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of Yastrow and Savithri to obtain the same inventions as claimed herein.

11. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yastrow in view of Savithri, and further in view of Yokomizo et al (U.S. Patent No. 6,522,418). The teachings of Yastrow and Savithri are described above, and in detail in their disclosures. However, they do not teach using a view translator plug-in in conjunction with the parasitic database, as claimed herein. However, Yokomizo et al cite a method for

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editing images in an image processing system, that utilize a viewer plug-in device (see column 15, lines 39 – 55; column 18, lines 16 – 24). Since using a viewer plug-in would greatly facilitate and improve the design and debugging steps of any IC design development program, it would therefore be obvious to one having ordinary skill in the art to combine all three teachings to obtain the same invention as claimed herein.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,828,580 to Ho cites a connectivity-based approach for extracting parasitic layout in an IC in which geometries in a layout are organized by nets, and uses a database for storing the extracted parasitics.

U.S. Patent No. 6,314,546 to Muddu discloses a non-iterative approach for estimating interconnect capacitive effects that includes modeling the gate and estimating an effective capacitance for the interconnect capacitive effects.

U.S. Patent No. 6,279,142 to Bowen et al teaches a method of on-chip interconnect design in an IC that generates an RC network for each net.

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U.S. Patent No. 5,993,050 to Miura recites a model parameter extracting apparatus consisting of a range designation unit, a combination designation unit, a simulator, a calibrator, a determination unit, and a range update unit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Magid Y Dimyan whose telephone number is (703) 308-1354. The examiner can normally be reached on Monday - Friday 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S Smith can be reached on (703) 308-1323. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Magid Y Dimyan
Examiner
Art Unit 2825

myd
July 17, 2003



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